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February 26, 2010

Mr. James E. Kyle, PE
Air Permit Manager
Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

Subject: Old Dominion Electric Cooperative – Cypress Creek Power Station – Submittal of Responses to DEQ's May 18, 2009 Letter

Dear Mr. Kyle:

Old Dominion Electric Cooperative (ODEC) submitted a Prevention of Significant Deterioration (PSD) air permit application for the proposed 1,500 MW coal-fired Cypress Creek Power Station dated December 17, 2008 and a supplemental case-by-case MACT analysis dated February 10, 2009. The Virginia Department of Environmental Quality (VDEQ) sent a letter dated May 18, 2009 providing interim comments on the application and MACT analysis. This submittal serves as a response to the VDEQ's comments. Each of the VDEQ's comments is listed below, followed by ODEC's response.

Comment 1: LGBF
The Local Governing Body Form (LGBF) has not been received by VDEQ from the incorporated town of Dendron, Virginia indicating the site is acceptable based upon local zoning and ordinance requirements. DEQ must have a copy of the transmittal letter and signed LGBF to be submitted before we can continue processing ODEC's PSD application.

Response 1:
The local zoning approvals were completed the first week of February 2010 for the proposed location of the Cypress Creek Power Station. Due to the fact that the proposed project site will encompass acreage that is in both the Town of Dendron and the County of Surry, the transmittal letter sent to and LGBF from each locality are included as Attachment 1.

Comment 2: Coal Quality
The application must contain a full description of coal quality (to include average and maximum % sulfur content, ash, trace metals (AP-42), fluorides, chlorides and Btu content); this information will be used to verify your estimated emissions. In addition to the design coal specifications, ODEC must include a list of other available coal types (Appalachian, Powder River Basin, etc.), the costs associated with these alternative coals, and similar (to that requested for the design coal) coal quality data for the alternative coals and BACT analysis for coal cleaning and processing.

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Response 2:
Appendix E of Attachment 2 (revised BACT analysis) contains a full description of the anticipated coal quality and corresponding coal quality specifications for the alternative coals reviewed. In addition, the projected costs associated with other coal types have been included in the revised BACT analysis.

Comment 3: $PM_{2.5}$
Particulate matter with aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$) must be evaluated in terms of a 10 ton per year threshold as a "significant" pollutant under the definition of the same in the PSD regulation. $PM_{2.5}$ is a regulated pollutant in Virginia's PSD permit program and although Virginia has adopted EPA's policy of using PM_{10} as a surrogate for $PM_{2.5}$, this policy will no longer be in effect by the projected start-up date for the Cypress Creek Power Station facility. Requiring a $PM_{2.5}$ analysis for this facility is consistent with the requirements applied to the Virginia City Hybrid Energy Center (WCHEC) permit. Therefore, the application must contain a top-down BACT analysis for $PM_{2.5}$.

Response 3:
The top-down particulate BACT analysis has been revised and is included in the revised BACT analysis found in Attachment 2.

Comment 4: BACT/MACT
The application must contain estimated uncontrolled emissions levels for all criteria and HAP pollutants for the plant without add-on controls. The application must contain estimated removal efficiencies for each control system evaluated and each pollutant. Recent permits issued to coal-fired power plants including, but not limited to the Virginia City Hybrid Energy Center, the Santee Cooper permit in South Carolina and the Desert Rock, New Mexico permit reflect the level of control that should be evaluated for your proposed super critical pulverized coal boilers. DEQ will be using short-term averaging times for criteria pollutants and the application must contain emissions estimates that support each of these limits. DEQ expects an aggressive level of control will result in significant reductions in annual and hourly emissions. DEQ anticipates ODEC's BACT and case-by-case MACT analysis to be at an equivalent or better level of control unless you can demonstrate otherwise. DEQ fully understands that this may result in BACT costs per ton that are above levels that are reflected in ODEC's current analysis. In addition, we are specifically requesting that ODEC evaluate Electro-Catalytic Oxidation (ECO) integrated control technology and any other comprehensive integrated control technology that is available.

Response 4: *A table showing all estimated uncontrolled and controlled emissions, as well as approximate control efficiency where applicable, for criteria pollutants and HAPs from the coal boilers may be found in Attachment 3. ODEC is providing these estimates to assist in your review; however, the BACT and MACT analyses should be referenced for all proposed limits for each pollutant. In addition, we understand that your staff will also need the same estimates summarized for the other emission sources at the proposed facility. We will provide a follow-up submittal with those tables within the next two weeks. The BACT and MACT analyses have been revised to incorporate your comments on Comment 4. ECO has specifically been analyzed for this project and included in the BACT analysis. The revised BACT analysis may be found in Attachment 2 and the revised MACT analysis may be found in Attachment 4.*

Comment 5: Integrated Gasification Combined Cycle (IGCC)

Although Virginia does not currently consider IGCC to be a control technology for the purposes of a PSD BACT analysis, the potential applicability of this technology to the Cypress Creek Power Station project is likely to be a very high profile topic. DEQ therefore requests that ODEC provide a thorough evaluation of the potential applicability of IGCC to the Cypress Creek Power Station project. It should include a discussion of the advantages and disadvantages of IGCC relative to the selected combustion technology for issues such as cost, reliability, air pollution emissions and any other considerations that factored in ODEC's rejection of IGCC.

Response 5: *Attachment 5 is the Coal Conversion Technology Assessment prepared for ODEC. This paper includes a critical assessment of three options for meeting ODEC's baseload needs: IGCC, a supercritical boiler, and a subcritical boiler. The assessment highlights costs, performance/efficiency, operational issues, emissions, as well as the potential for CO_2 capture. In addition to the technology assessment, ultra-supercritcal and supercritical boilers were compared in ODEC's Steam Conditions Technology Review, which is found in Attachment 6.*

Comment 6: Green House Gases (GHG)s
At this time, Virginia does not consider Carbon Dioxide (CO_2) to be a PSD regulated pollutant. As you know however, the new EPA Administration is reconsidering the application of the Clean Air Act to GHGs. For now, the DEQ requests that ODEC provide an estimate of their potential GHG emissions.

Response 6: *Greenhouse gas emissions from the proposed Cypress Creek Power Station were calculated in accordance with the methodology in the final Mandatory Greenhouse Reporting Rule that was effective in December 2009. The emissions summary, supporting calculations, and calculation methodology are presented in Attachment 7 to this letter.*

Thank you for the opportunity to respond to your comments. We believe this submittal satisfies your requests for additional information. For your convenience, we have included electronic copies of both the BACT and MACT analyses on CD, including the appendices to the BACT which were not printed out as part of this submittal, due their large size. In addition, we have placed the complete submittal on ODEC's FTP site for Mr. Lisle and Mr. Kiss to download.

ODEC would like to discuss the revised BACT and MACT analyses with you upon completion of your review. Please contact David Smith at (804) 968-4045 at your earliest convenience. As you know, VDEQ's concurrence and approval of these emission rates is needed in order to facilitate ODEC's efforts to submit a complete revised application, including air dispersion modeling.

Thank you for your time and consideration on this very important project.

Sincerely,

Lisa D. Johnson
Senior Vice President of Power Supply

cc: Ken Alexander
Kyle Winter, VDEQ
Sparky Lisle, VDEQ (electronic copy
Mike Kiss, VDEQ (electronic copy)

DOCUMENT CERTIFICATION

Facility Name: Cypress Creek Power Station

Registration No. 52272

Facility Location: Dendron, VA (Surry County) US Hwy 460 to Wakefield, VA, turn east on VA Hwy 30, turn south on Faison St in Dendron, VA, continue for approximately 0.6 miles.

Type of Submittal Attached: Cypress Creek Power Station – Submittal of Responses to DEQ's May 18, 2009 Letter.

Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Responsible Official (Print): Lisa D. Johnson

Title: Senior Vice President of Power Supply

Signature: _____ **Date:** 2-26-10